



MINIATURE BUTTON SWITCH

WITH N.O., N.C., OR N.O. AND N.C.

MOMENTARY SWITCH

MBS Series

The MBS Series is a compact, highly reliable momentary push-button switch designed to conserve panel space on computers, data processing, industrial control and missile guidance systems. The MBS Series mounts in a 3/8" hole on 9/16" centers with only a 1" projection behind the panel.

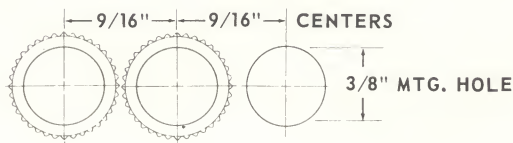
Switch contact rating is 100 ma at 115 VAC, non-inductive, with a switch life of 1,000,000 operations at rated current.

The momentary contact switch is activated by depressing the pushbutton. Three switch options are available: (1) normally open, (2) normally closed, (3) normally open and normally closed.

SPECIFICATIONS

See reverse side for Mechanical, Electrical and Material Specifications.

MOUNTING HOLE DIMENSIONS



THREE BASIC MODELS

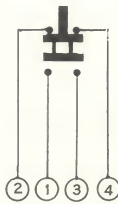
TYPE A
(Normally open)



TYPE B
(Normally closed)



TYPE C
(Normally open and normally closed)



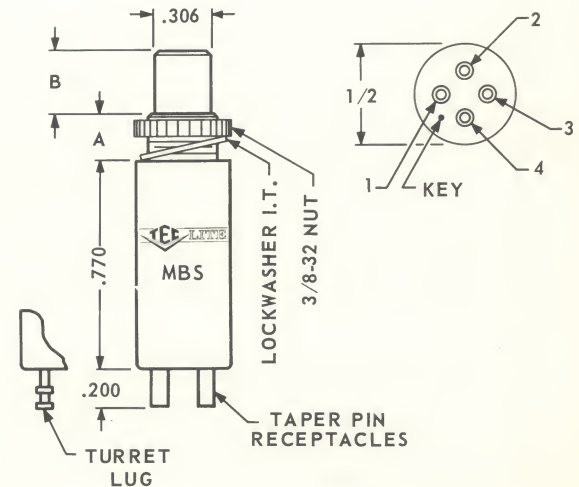
TERMINAL CONNECTIONS



OUTLINE DRAWING

Tolerance: Dec. $\pm .010$; Frac. $\pm 1/32$

ACTUAL SIZE



PANEL THICKNESS	DIM. A	DIM. B
1/16" to 1/8"	.250	.343
9/64" to 3/16"	.312	.281

MODEL NUMBER CODING . . . Specify Fully When Ordering

CONTACT TYPE:
A—Normally open
B—Normally closed
C—Normally open and normally closed

MBS-X-XXX

TERMINALS:
L—Turret Lug
T—Taper Pin

BUTTON COLOR:
0—Black
1—Brown
2—Red
3—Orange
4—Yellow
5—Green
6—Blue
7—Violet
8—Grey
9—White

EXAMPLE: MBS-A-CTO
Miniature Button Switch: Normally open switch contacts; for panel thickness 1/16" to 1/8", clear anodized body and nut; taper pin receptacle terminals; black button.

PANEL THICKNESS, BODY AND NUT COLOR:

A—1/16" - 1/8" Panel - Black
B—9/64" - 3/16" Panel - Black
C—1/16" - 1/8" Panel - Clear
D—9/64" - 3/16" Panel - Clear
E—1/16" - 1/8" Panel - Clear Iridite
F—9/64" - 3/16" Panel - Clear Iridite

All Specifications Subject to Change Without Notice



Transistor Electronics Corporation

TELEPHONE
(612) 941-1100

BOX 6191
MINNEAPOLIS, MINN. 55424

TELETYPE
910-576-2860

LOCATED ON COUNTY ROAD 18 • 1 1/2 MILES NO. OF HWY. 494



MINIATURE BUTTON SWITCH

WITH N.O., N.C., OR N.O. AND N.C. MOMENTARY SWITCH

SPECIFICATIONS

MECHANICAL

Dimensions: See outline drawing.

Mounting: MBS Series mounts from the rear with a knurled nut and lockwasher in a 3/8" hole on centers as close as 9/16". Designed to fit 1/16" to 1/8" and 9/64" to 3/16" panel thickness. Note: Use TEC wrench #1418 for knurled nut when mounted on 5/8" or larger centers.

Button: Flat top design in 10 colors.

Hot Stamped Legends: MBS Series buttons will accept one letter, numeral or symbol up to 13/64" or as many as three characters up to 7/64" high hot stamped on button face. See TEC Data Sheet #108 on Hot Stamped Legends.

Body and Nut: Black or clear anodized aluminum or clear irridite (for RFI). Other colors available on special order.

Switch Contacts and Action: Stationary contacts, brass with gold finish; movable contacts, beryllium copper with gold finish. Life: 1,000,000 operations at rated current. Momentary action. Wiping action increases reliability.

Terminals: Turret lug or series "53" taper pin receptacle with gold finish. See TEC Data Sheet No. 109 on Terminals.

Temperature Range: Operating and storage, -40°C to +60°C at 95% humidity, maximum.

Labeling: Units will be labeled with the complete model number as shown on the reverse side.

ELECTRICAL

Switch Contact Rating: 100 ma at 115 VAC, non-inductive. Three switch options: (1) Normally open. (2) Normally closed. (3) Normally open and normally closed.

RFI Shielding: Available as a combination of irridite body used with RFI Shielding Cap. RFI Shielding Cap screws onto nut threads. Available only when "F" option (dimension "A" = .312; clear irridite body) is selected and panel thickness is 1/8" or less. Order RFI Shielding Cap separately (Tec Part No. 981190).

MATERIALS SPECIFICATIONS*

Button: Acetate Butyrate Plastic.

Body and Nut: Aluminum with anodized finish. Clear irridite available for RFI Shielding.

Lockwasher: Cadmium plated steel.

Switch Contacts: Gold finish.

Header: Molded diallyl phthalate.

Terminals: Brass with gold finish.

*Certificates of Compliance and Government Source Inspection Available.

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SUBMINIATURE MINI-LITE[®] INDICATOR

STL Series

WITH NEON OR INCANDESCENT LAMP

In this extremely small device, a neon or incandescent lamp is transistor controlled from low-level signals typically present in solid-state systems. Lamp, transistor, and related circuitry are packaged in a .360" diameter by .600" long body and mounts on 3/8" centers in a 1/4" hole. Overall length is only 1-1/8". The STL Series is available with a permanently wired T-1 type neon or incandescent lamp. Use this rugged, long-life, subminiature solid-state indicator in applications where many indications are required in a small area.

An MSTL Series TEC-LITE indicator designed specifically for Integrated Circuits is also available. Request TEC-LITE "M" Series Brochure.

SPECIFICATIONS

See reverse side for mechanical, electrical and materials specifications.

TABLE 1. INCANDESCENTS, SIGNALS AND SUPPLY VOLTAGES *

MODEL	SIGNAL		SUPPLY VOLTAGE	SUPPLY CURRENT (Nom)	LAMP TYPE
	ON	OFF			
1A	+2ma	0 to -4V	+ 3 VDC	60 MA	72
1B	-2ma	0 to +4V	- 3 VDC	60 MA	72
1C	+2ma	0 to -4V	+ 5 VDC	60 MA	683
1D	-2ma	0 to +4V	- 5 VDC	60 MA	683
1E	+1ma	0 to -4V	+10 VDC	27 MA	74
1F	-1ma	0 to +4V	-10 VDC	27 MA	74
1G	+2ma	0 to -4V	+12 VDC	60 MA	66
1H	-2ma	0 to +4V	-12 VDC	60 MA	66
1J	+1ma	0 to -4V	+18 VDC	26 MA	75
1K	-1ma	0 to +4V	-18 VDC	26 MA	75
1L	+1ma	0 to -4V	+28 VDC	24 MA	62
1M	-1ma	0 to +4V	-28 VDC	24 MA	62

*Input Impedance - 1K (Nominal)

TABLE 2. NEONS ** TYPE 95

MODEL	SIGNAL VOLTAGES		NOM. SUPPLY CURRENT	
	ON	OFF	ON	OFF
NA	+4 to +10	+5 to -4	.7 ma	.2 ma
NB	-.5 to +10	-4 to -7	.7 ma	.2 ma
NC	-4 to -10	-.5 to +4	.7 ma	.2 ma
ND	+.5 to -10	+4 to +7	.7 ma	.2 ma

**Input Impedance - 15K (nominal)

Models A and B, Supply Voltage + 150 (± 10) VDC @ 3 ma (nominal)
Models C and D, Supply Voltage - 150 (± 10) VDC @ 3 ma (nominal)

MODEL NUMBER CODING . . . Specify Fully When Ordering

MODEL :

IX = Incandescent lamp
NX = Neon lamp
"X" denotes signal level.
See Tables 1 and 2 above.

EXAMPLE: STL-1A-AL-2

Subminiature Mini-Lite: Incandescent lamp, ON: +2 ma, OFF: 0 to -4V; for panel thickness 1/16" to 1/8"; Black anodized body; Turret lug terminals; Transparent red lens.

PANEL THICKNESS, BODY AND NUT COLOR:

A - 1/16" to 1/8" Black
B - 9/64" to 3/16" Black
C - 1/16" to 1/8" Clear
D - 9/64" to 3/16" Clear

TERMINAL TYPE:

L - Turret Lug

STL-XX-XX-X

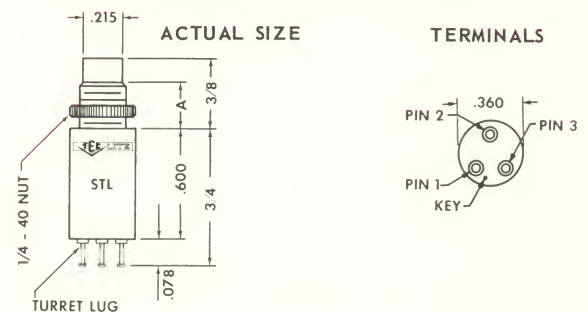
LENS COLOR:

- | | |
|------------------------|----------------------------------|
| 1 - Translucent Red | 9 - Translucent White |
| 2 - Transparent Red | 11 - Translucent Orange |
| 3 - Transparent Amber | 12 - Transparent Green* |
| 4 - Translucent Yellow | 13 - Transparent Blue* |
| 5 - Translucent Green* | 14 - Transparent Yellow |
| 6 - Translucent Blue* | |
| 7 - Clear | * Not recommended For Neon Lamps |
| 8 - Transparent White | |

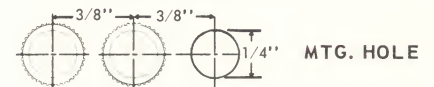


OUTLINE DRAWING

Tolerance: Dec. ± .010; Frac. ± 1/32



MOUNTING HOLE DIMENSIONS



PANEL THICKNESS	DIMENSION "A"
1/16" to 1/8"	.250
9/64" to 3/16"	.312

PIN CONNECTIONS		
Pin No. 1	Pin No. 2	Pin No. 3
Signal	Supply	Common

All Specifications Subject to Change Without Notice



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SUBMINIATURE MINI-LITE® INDICATOR

WITH NEON OR INCANDESCENT LAMP

SPECIFICATIONS

MECHANICAL

Dimensions: See outline drawing on reverse side.

Mounting: STL Series MINI-LITE mounts from the rear with a knurled nut in a 1/4" hole on centers as close as 3/8". Designed to fit 1/16" to 1/8" and 9/64" to 3/16" panel thickness.

Lens: Flat top design in 13 colors. One letter, numeral or symbol up to 5/32" or two characters 3/32" high can be hot stamped on the lens face in various colors. See TEC-Data Sheet No. 108 on Hot Stamped Legends.

Body and Nut: Black or clear anodized aluminum. Other colors including iridite available on special order.

Terminals: Turret lug. Brass with silver finish.

Temperature Range: Operating and storage, -40°C to +65°C at 95% humidity, maximum.

Labeling: The complete model number code (see reverse side) will be labeled on units.

ELECTRICAL

Lamps: Permanently wired T-1 type incandescent or neon.

Signal and Supply Voltages: See Tables 1 and 2 on reverse side. Note: Because the signals are referenced to the common terminal, signal levels can be shifted up or down by using, respectively, a negative or positive external bias voltage on the common terminal. It is also possible, in most cases, to extend the permissible maximum signal swing.

Supply voltage is measured between supply and common terminals. If bias is used on the common terminal to change input signal ranges, the supply voltage must either be returned to the common terminal or, if returned to ground, adjusted to compensate for bias effect.

Terminals: All terminals are isolated from the indicator body.

MATERIALS *

Lens: Acetate butyrate plastic.

Body and Nut: Aluminum with anodized finish.

Header: Epoxy glass laminate.

Terminals: Turret lug. Brass with silver finish.

* Certificates of Compliance and Government Source Inspection Available.

TEC-LITE Indicator Devices are protected by one or more of the following patents: U.S. Pat. Nos. 2,985,874; 3,041,499; 3,116,480; Australia: Patented May 3, 1961, 244,756; Belgium: Brevet belge No. 604,246 and 637,379; Canada: Patented 1964 Patented 1965; France: Brevete S.G.C.G.; Germany: DBP 1,175,778; Great Britain: Pat. Nos. 1,003,994 and 978,436; Italy: Brevettato; Switzerland: + 376,541 and +392,687.

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